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ABSTRACT

This speech deals with the contribution of sociology to the understanding of effectiveness in teaching, and the non-individual factors arising from the formal and informal social structure of the classroom. A review of related literature indicates the prospects for understanding the relationship between what the school does, as represented by the teacher and the curriculum, and what happens to the student. Five contributions of sociologists to classroom learning suggest 1) Structural factors in the organization of teaching vary so greatly that the possibility of creating a systematic understanding of the conditions of teaching effectiveness based on teacher talk and student learning appears limited. 2) Participation rates of students suggest that a tutorial model of teacher-student interaction will prove inadequate. 3) Studies of the effects of classroom status systems conditionalize any statements concerning teacher effectiveness. 4) The teacher's role as a bureaucratic authority figure varies with each class. 5) The school and teacher's use of authority may affect learning through the organization's effect on the student's sense of control of his environment. Results of the study indicate the need to develop and test propositions stating the conditions under which we expect observed relationships between teaching and learning to hold. A 34-item bibliography is included. (MJM)

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Sociology And The Classroom: Setting The Conditions For
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Sociology And The Classroom: Setting the Conditions For Teacher-Student Interaction

In talking about the contribution of sociology to the study of the classroom I would like to make two choices. The first is a restriction to the problem of understanding the relationship between classroom teaching and student growth or learning. This is the critical question for the educational reformers, for the policy makers trying to decide how to invest public moneys and for the society now demanding a much higher success rate in public education than has been achieved in the past. Because it is such an imperative question for applied educational research, I would like to confine myself to the contribution of sociology to the understanding of effectiveness in teaching.

Secondly, I would like to restrict myself to non-individual factors arising from the formal and informal social structure of the classroom. Behavioral scientists have been concerned with characteristics of individuals as explanations for success or failure in the classroom---characteristics like intelligence or social class background. Failures of the school have been attributed to not knowing how to help certain kinds of individuals. I would like to omit in this paper both psychological and sociological factors when they are used to discuss individual differences and to move, for the sake of argument, to a more general level. For example, instead of looking at the socio-economic background of individuals as related to achievement, I would like to examine the effects on learning of the development of status systems in the ongoing classroom.

With these as ground rules, let us take a look at the prospects for understanding the relationship between what the school does, as represented by the teacher and the curriculum and what happens to the student.

Educational sociologists and psychologists have pretty much gone their separate ways in studying teaching and learning. Psychologists have conducted inductive, empirical research in traditional classroom settings where learning is supposed to take place because of what the teacher says, the questions asked and the responses given to student initiation. These are seen as antecedent variables; there is a search for correlations between variations in these teacher behaviors and the consequent learning of the student. Elaborate systems of interaction scoring have developed and are used as general measuring instruments. It is the major theme of this paper that the search for a set of propositions about what makes for effective teaching will be fruitless as long as it remains on the level of teacher talk - student talk, and variations in individual learning and as long as it remains essentially an inductive atheoretical research operation. Sociologists have studied the organization of teaching and have made theoretical and empirical studies of the classroom as a social system. They have learned just enough to presume to make some constructive suggestions for the educational researcher who wants to understand why and how teacher-student interaction comes to effect achievement.

The first bit of advice comes from studies of the school as an

organisation. Students of the organization of teaching such as Bidwell, Lortie and Pellegrin have pointed out that there is every reason to expect great variability between teachers in instructional activities (Bidwell, 1971; Lortie, 1969; Pellegrin, 1971). There is not an acknowledged body of pedagogy in teacher training passed on in standard fashion in schools of education. Once the new teachers are on the job, they are severely isolated from professional interaction with one another. They don't talk much about methods of teaching; and they practically never see one another teach (Meyer, Cohen, et.al., 1972). Thus, they are not likely to learn some set of teaching methods from on-the-job socialization with the exception of methods of classroom control. Since there is no standard body of knowledge labeled "pedagogy", one might expect that some standardization of teacher behavior would be achieved by supervision of principals or department chairmen. But numerous studies point to the relative infrequency of evaluation of teachers, (Meyer & Cohen, 1972). I think the situation is best summed up in a finding of several recent studies done by the Environment for Teaching Program at Stanford's R & D Center. Teachers were asked whether or not they agreed with the following statement, "In general, the personality characteristics of a teacher are more important than any particular knowledge or set of skills the teacher possesses in determining success in teaching." In two studies coming to a total of nearly 300 teachers, 78% and 74% agreed to this item. (McCauley, 1972; Marram, 1971). Here is a profession in search of its own expertise!

There is so much variability that the student of classroom interaction looking at a sample of classrooms is most unlikely to find reliable relationships between any number of measures of teacher-student interaction and student learning unless a very specific curriculum or instructional system directs the teachers' behavior.

Even in studies where the sample is restricted to teachers working with the same age children and the same curriculum package or instructional program, Rosenshine concludes in a recent review that there are significant differences among the instructional activities of teachers (Renshine,1970). For example, Gallagher compared six teachers who were teaching the same unit from the same BSCS curriculum materials package. On almost all measures of teacher behavior there were significant differences among the six teachers. The differences in amount of teacher talk during various activities and on the percentage coverage of the various topics in Gallagher's content analysis scheme were so great that the investigator concluded "the data would suggest that there really is no such thing as a BSCS curriculum presentation in schools" (Gallagher,1971).

Facing this problem of variability, reserachers studying conditions for effective teaching would do well to restrict themselves to situations where there is some kind of a rationale for the relationship between the teacher's activities and particular learning outcomes in the student. Some of the highly developed instructional systems have this quality and teachers themselves may have developed such rationales as individuals or as a team. Classroom interaction studies might then

profitably be made to determine if the instructional activities are taking place as planned and are producing the outcomes for which they are intended. The choice of categories for observation would reflect the rationale of the teaching process. For example, if a particular curriculum had as an objective that the child be an "active inquirer"; and if the theory behind the curriculum assumed that active practice and rehearsal were necessary to achieve these objectives, then the target of observation should be, not what the teacher says, but how the classroom activities are structured so as to give each child the maximum change for active practice at inquiry.

Sociological studies of classroom interaction raise a serious question for the research on teaching effectiveness. Teacher effectiveness studies typically concentrate on changing what the teacher says and the quality of teacher-student interaction. But there is a problem in assuming that the learning of thirty students in a classroom can be understood with the same set of ideas useful for understanding learning in a two-person tutorial situation. If I am a student and if I have a teacher who explains things very well, who asks questions broadly, who makes students extend answers to questions and who frequently reinforces, it is thought that I will learn. But what if I never raise my hand, sit in the back of the room, often fail to listen and rarely engage in question-answer interchange with my teacher? Will I receive the same benefits as the eager student who sits up front and has all the direct interaction with the teacher?

Adams & Biddle have raised this fundamental question in their

study of videotapes of 36 lessons in 16 classrooms. They found, as have many other studies, that classroom interaction is dominated by the talking of the teacher. Much more profound is their finding that for more than 75% of the total time, the classrooms were organized so that only a central communication group existed with the teacher as the most frequent emitter and target in that central group. Of those 1176 occasions when there was a pupil emitter, that pupil was located in three seats, one behind the other down the center of the room 63% of the time. If this center area is extended to include the seats at the front block of desks immediately on either side of the strip, so there is a t-shaped zone of six seats, Adams & Biddle state that virtually all of the pupil emitters are accounted for (Adams & Biddle, 1970). There are at least two important implications from this study. One is obvious--something different in the way of a theoretical explanation for learning is called for depending on whether or not the student participates. The second implication is one for the redesign of classrooms--if children who participate actively learn more than those who don't (and we don't know for which tasks this holds true) then something drastic needs to be done to redesign the classroom task structure and the role of the teacher so as to increase the level of active participation.

The third piece of advice that sociologists might offer is that propositions about the relationship between teacher activities and student learning will depend on the state of the social system in the classroom. It is most unwise to use a simple uni-directional causal model to characterize the classroom, i.e., teachers affect

students through what they say, how they question, how they explain, and through the use of curriculum materials. Studies of the classroom as a complex social system suggest that cause and effect can run in several directions. Students have effects on the teacher, who in turn affects the learning of the student. Students have effects on each other; and the informal social structure is the product of these effects; the informal social structure produces differential treatment of students by the teacher. Furthermore, the effects which students have on the teacher and on other students tend to build up over time. This kind of a characterization of learning in the classroom calls for theories capable of handling feedback effects and processes which change over time.

Applied researchers in education, as a rule, are not much interested in the abstract ways a classroom can be analyzed through the peculiar eyes of a sociologist. They want the answer to the question, "So What?" Put as simply as possible, using too simple a theoretical model, especially when that theoretical model is implicit rather than spelled out, may lead to false recommendations for change.

Sociological and socio-psychological researchers have observed that classrooms contain a number of status systems and that the teacher is intimately involved in the construction and maintenance of some of these status systems. Furthermore, under certain conditions these status systems have important effects on learning. These effects on learning most probably have a complex interaction with individual abilities and with the mode of instruction. In other words the social scientist suggests that one's place in the status system of the classroom has important effects

on learning through the medium of active participation in the learning task and the evaluation and response to that student's attempt to learn. Ranking in one status system may determine active involvement in the task of learning or alternatively, passive withdrawal from learning. Ranking in another status system may determine active involvement in the task of manipulating the teacher by challenging her authority. The effects on learning following this kind of individual behavior are fairly obvious.

I am not claiming that research has shown this all to be true, nor have theories been constructed capable of handling such complexities simultaneously. There have, however, been a number of studies illustrating that status in the classroom can, under certain conditions, affect the learning of the student. What remains to be done is a theoretical and empirical development of the conditions under which this takes place.

In selecting studies, I have defined status broadly as the ranking of individuals. Rank in a status order carries with it specific expectations for ability to do certain tasks well or poorly. Status is also the basis for general expectations to be competent or incompetent at tasks considered socially important by the individuals involved. Those of you familiar with the theory of status characteristics and performance expectations (Berger, Cohen & Zelditch, 1966) will recognize this theoretical framework.

Status in the classroom can have multiple bases: societal status characteristics, sociometric status or achievement status. Societal status characteristics in many classrooms include differences in sex, social class, race, and ethnic group. These characteristics may affect the learning of individuals through some medium of early socialization, but of central

interest here is how they come to have effects on achievement as a product of classroom interaction.

Achievement status is a second basis for rank ordering in the classroom because of the nature of grades, ability grouping and recitation in the typical classroom. Over time, students develop an achievement pattern which is known to themselves, to other students and to the teacher, operating like any other status ranking. Many teachers and students seem to believe that there is one general human ability with smart high-achieving students and "dumb" low-achieving students at the other end of the continuum. There are also measurable achievement differences in these two groups; no doubt some of the performance differential is due to individual differences in ability and skills, but the sociologist hypothesizes that some of the variance in performance is due to the expectations for competence held by the teachers and students for high-achieving smart students as compared to low-achieving dull students (Brookover, 1965).

Finally students form their own status ranking in the classroom based on social power and bonds of liking and attraction (Glidewell & Kantor, 1966; Gold, 1958). Some children are chosen by many; and some children are not chosen by their peers as influential or likeable. Competence in the student world may not be defined in the same basis as in the official world of the school, so that some student cultures may not regard learning tasks as important tasks or grades as important evaluations. Socially important tasks may be "making the teacher red in the face", manipulating the hall pass system or being a big man on the playground.

What is the evidence of the relation of one's place in the status

system to one's active classroom participation and to achievement? First with regard to social status characteristics, there are observable associations between social status and activity rates in the classroom. Katz and Brophy & Good found that to be female is to have a lower initiation rate in the classroom (Katz, 1972; Brophy & Good, 1970). Katz also found that to be black or brown was to be less active in the classroom and that to be brown (Mexican-American) was to be called on less often than one's hand was raised. To be a white male is to speak up and participate more often than one's hand is raised. Note here the probable operation of both the low status person's expectations for himself as well as the teacher's expectation that low status students are unlikely to contribute to class progress through recitation.

The effect of status ordering on achievement theoretically takes place by means of the "self-fulfilling prophecy". Initiation rates are critical indicators of this mechanism because those who are expected to be more competent by self and other, participate more; they are then evaluated as being more competent partly because of this initiation. A most dramatic study of the self-fulfilling prophecy in a all-black setting is the study by Rist, (1970). Rist followed a group of black youngsters in a ghetto school taught by black teachers from kindergarten through the second grade. In the kindergarten the lower social class children were more likely to be placed at the back of the room, regardless of reading readiness scores. These children had a lower rate of interaction with the teacher than the front table group; and Rist could see that they were often not able to hear and see what was going on. By the second grade

the initial division had become a true performance differential so that those at the back table were now poorer readers. Of the children who remained in the same school, none had moved up between groups; and the back table was now socially labeled as "The Clowns." Of critical importance in this study is the way that status characteristics taken from the outer society become translated into performance differentials. These performance differentials may then have a more powerful effect on the teacher's expectations than the initial status distinctions. An earlier study by Zander & Van Egmond, (1963) showed the effect of sex status on activity and influence in classroom problem-solving groups. Girls were far less active and influential than boys in classroom problem-solving groups when placed in a free-flowing mixed sex group.

Research interest in perceived academic ability as a basis for expectations has been growing in the last few years. Following the controversial study of teacher expectations by Rosenthal & Jacobson, (1968), the idea of teacher's having an effect on learning through their expectations for better performance from some children than from others is becoming widely accepted among practitioners---somewhat ahead of research evidence to this effect. In a fine-grained study of sequential interaction between teachers and selected students, Brophy and Good find that those rated by the teachers as high achievers in first grade classrooms initiate more work-related contacts and create more response opportunities for themselves. Furthermore, teachers consistently favored "highs" over "lows" in demanding and reinforcing quality performance. The "highs" were more frequently praised when correct and less frequently

criticized when incorrect or unable to respond. Teachers were more persistent in eliciting responses from "highs" than from "lows." They were more likely to supply the answer and call on another child when responding to the "lows". (Proply & Good, 1970). In an older study, Hoehn had expected to find qualitative differences in teacher's response to children of different social status, but found instead a sharp qualitative difference in teacher response to children differing in achievement status rather than social status (Hoehn, 1954).

Perceived academic ability, in a recent study of junior high school classmates, turned out to be the basis of expectations for performance, on a group task, totally non-academic, non-competitive, and non-intellectual in nature (Hoffman, 1972). In this study a game simulation was used because these tasks are often designed by curriculum specialists as a way to bring out the talents and participation of children usually labeled as low achievers. Nonetheless, ranking on perceived academic ability by self and classmates predicted how active a student would be in playing the game.

The competitive reward structure of most American classrooms where individuals are always held accountable and where members compete for the scarce commodity of good grades, probably aggravates the dysfunctional effect of status problems. Sociologists and psychologists have both adjudged the nature of the reward structure as a critical dimension for study in understanding motivation and output of students. Coleman has attempted to build a stochastic model of "situations in which one person's achievement takes away from another's success, and in turn the other person discourages efforts leading to such achievement" (Coleman, 1962). In an

experiment where the data have just been analyzed at Stanford, Awang-Mad finds that individual accountability greatly exaggerates the effect of status differences in a group of seventh and ninth graders. When individuals were held accountable for the quality of their contribution to the selection of the right answer, the younger members were much less influential than when the group as a whole was held accountable. Horner found that women did less well on tests when they were put in situations competitive with men than when tested alone (Horner, 1969). There have been experimental studies modifying the reward structure in the classroom on an individual basis, but none yet done on modifying the competitive norms and total reward system so characteristic of American classrooms.

On informal social status in the classroom there is a substantial body of research. In the 1950's there were many sociometric studies, mostly on the descriptive level (Gronlund, 1959). Some students are much better liked than others; some students are more socially powerful than others. These rankings have considerable stability over time (Glidewell & Kantor, 1966; Gold, 1958). Informal status ordering is associated with student achievement in several ways. Some studies show that pupils who know that their sociometric status is low on liking or influence criteria are likely to be doing less good work, considering their ability scores, than are students who see themselves as having higher status (Schmuck, 1962, 1963). The effect on performance is more widespread in classes where a relatively few children are chosen as likeable and powerful than in classes where there are many more children chosen (a diffuse sociometric structure).

When the informal world of the students does not include strong values on achievement, those involved in the peer group can lower their learning and educational aspiration rates (Coleman, 1961; Gordon, C.W., 1957; Alexander & Campbell, 1964). The conditions under which choice status comes to affect performance appear to be complex. Backman and Secord sum up the literature as follows:

A high choice status is not necessarily associated with good performance and low status with the reverse. The relation will depend on the child's perception of his status, the norm of his group, and the degree to which the child's personality needs make him dependent on the group--and the availability of alternatives. (Backman & Secord, 1963, p 112)

The informal status system of the students is the netherworld of the classroom. The literature suggests that if the teacher sets up task groups in the classroom to carry out learning tasks, children who are powerful in the informal structure will become dominant in the problem-solving group (Zander & Van Egmond, 1963). It is very likely then that the effect of the informal status system on active participation in the class is partly dependent on the teacher's grouping practices and on the amount of free-flowing peer interactions allowed on learning tasks.

Probably the most tantalizing inference from research may be made from evidence of variability in teacher's relationship to the informal social structure of the students. In a curious early study Polansky reported that classrooms characterized as having a desirable social climate turned out to be classrooms where teachers supported the informal status ordering of the students by differential attention to high and low ranking students (Polansky, 1954). Gordon also found teachers treating socially

prominent students in a more affectively-toned manner than students less popular and less active in extra-curricular activities (Gordon, 1957). Is it possible that teachers unconsciously promote academic success for the popular and influential students so as to avoid open warfare with a student status system emphasizing non-academic values?

To summarize the argument thus far: Sociologists point to structural factors in the organization of teaching producing so much variability in how teachers carry out instructional activities that the possibility of coming up with systematic understanding of the conditions for teaching effectiveness through inductive studies of teacher-talk and student learning would appear very limited. Secondly, studies of the participation rates of students in typical classrooms suggest that a tutorial model of teacher-student interaction will prove quite inadequate to explain student learning. There are typically too few students who have the chance to interact with the teacher. Thirdly, studies of the effect of classroom status systems on the teacher and on the students' learning point to the necessity for conditionalizing any statements concerning teacher effectiveness: learning partly depends on the formal and informal structure of the classroom. Depending on the nature of the status systems in the classroom and depending upon the location of the actor in those various status systems, different kinds of teacher-student interaction will take place, and different degrees of learning.

The fourth contribution of sociologists to classroom learning deals with the teacher's role as a bureaucratic figure in the school, having the right and obligation to control and evaluate students. Learning

is also dependent on variation in the use of authority in the classroom. Sociologists have consistently emphasized the importance of the teacher's exercise of authority and the problematic nature of classroom control from the early classic by Willard Waller to the recent book by Dreeben (Waller, 1932; Dreeben, 1970). There appear to be some classrooms where control of behavior is so much more important a goal than substantive learning, that there is no use doing studies of teacher effectiveness in such places unless one is interested in the arts of classroom management. When the control attempts break down into utter chaos as described by Miriam Wasserman, the researcher will have no trouble avoiding these classes as subjects for study (Wasserman, 1970). But when the control system is highly effective and is carried out by the imposition of busy-work educational routines (Smith, 1968), the appearance of the classroom is deceptively "educational". Students of teacher effectiveness would do well to develop criteria for selecting classrooms for study only when learning is a major goal. Recent studies of urban schools indicate that in many classrooms with low-income children, the primary objective of the teacher is the socialization of obedience behavior rather than any type of substantive learning (Leacock, 1969; Levy, 1970).

In addition, the school and the teacher's use of authority may affect learning through the organization's effect on the student's sense of control of his environment. The work on this hypothesis is at an early stage. Well worthy of further study is the possibility that schools and classrooms providing low status students with a greater opportunity

to control their immediate environment, may promote a willingness to learn and a greater success in learning (Wittes,1970; St.John,1970).

If this all sounds discouraging to the student of teaching effectiveness, it is not meant to be. Studies of teacher behavior have undeniable value in the design of teacher-training, in-service training, curriculum development, and program evaluation. Nevertheless, researchers of teaching effectiveness need to make attempts to control the effects of key factors which also affect learning; also they need to cut down on teacher variability due to idiosyncratic differences in style. For the time being, it is hard to imagine how this can be done in ongoing classrooms. If the researchers restricted themselves to particular innovations in curriculum and instruction and examined the effectiveness of systematic variations in instructional strategy, their result would be more immediately useful. The use of students who have no previous knowledge of each other, who are all motivated to participate (so that authority is not problematic) and a teacher who has no prior basis for expectations for achievement on the part of individual students are all advisable controls. Most useful would be a rather highly developed instructional system where there are sub-goals of student learning and growth matched to particular instructional activities on the part of the teacher. Very pertinent to this line of thinking are the recommendations of Gage for experimentation with very specific tools, tools that have a base in the theories of learning (Gage,1971).

With this recommendation of relatively narrow-guage and controlled studies, I should turn at this point and make a plea for a brilliant new

theory capable of accounting for all the psychological and social complexities of the classroom--the long-awaited theory of teaching. There are people who think such theories can be created, but I am not one of them. Teaching no more qualifies as a phenomenon to be explained by scientific theory than geologists try to build theories of rocks. Teaching desperately needs analysis into more abstract components and so do teaching tasks. We need theories which are sufficiently simple so that ideas for manipulation of features of the classroom are actually derivable from the basic propositions. This workable theory of medium complexity will deal only with some of the analytic concepts suggested by past research. For example, a theory helpful in understanding and manipulating status systems in the classroom will probably not be the same theory which will prove helpful in changing the authority structure of the classroom. The would-be theorist must isolate the phenomenon in the classroom he wants to explain through analysis and preliminary study. Then he must consider the other dimensions as conditions under which his propositions about learning, hold, become modified, or fail to hold.

For example, I have been working on the application of the theory of status characteristic and expectation states to the classroom. Use of this theory suggests that if the status systems in the classroom have a depressant effect on the initiation rates and self-concepts of low status students, we can use Expectation Training to manipulate the expectations of teacher and student. Or we can redesign the tasks in the classroom so that students display a broader range of talent to each

other, thus destroying the "single human ability" idea underlying the dysfunctional effects of status. By extension of the theory to handle different kinds of reward structure, we can eliminate the basis for invidious social comparisons in classrooms, making the reward structure cooperative rather than competitive.

Probably the most encouraging aspect of this intrusion of the sociology and social psychology of learning into the field of teacher effectiveness is the opening of new avenues for the redesign of teaching and learning. We are not restricted to in-service and pre-service training of teachers as policy recommendations. We might try to manipulate very different features of the school in order to affect learning such as the way teachers work together, redesign of certain classroom tasks so as to achieve more active participation or the redesign of the social structure and authority system of the classroom.

These proposed changes in the classroom are distinctively different than the current mode of sporadic and romantic educational reform with its unconditionalized claims for Educational Utopia. These proposals will be based in analysis, theory, and the gathering of data from systematic and controlled observational surveys, laboratory studies and controlled field experiments in the classroom. If we who are educational researchers attempting to improve teaching and learning, can teach ourselves how to develop and test propositions stating the conditions under which we expect observed relationships between teaching and learning to hold, we will have a reasonable intellectual basis in

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